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## PATENT ABSTRACTS OF JAPAN

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### (54) METHOD AND APPARATUS FOR MEASURING ELASTICITY

#### (57) Abstract:

PURPOSE: To obtain a ratio of elastic values of an observing point to a reference point to represent levels of the elasticities of the points by obtaining a ratio of distortions of the reference point on a predetermined straight line extended in a specimen to be inspected to a predetermined observing point on the line in an extending direction of the line.

CONSTITUTION: A signal of a specimen tomographic image from a detector 16 is formed as a display signal by a scan converter 16, and the tomographic image is displayed on a display unit 17. A displacement of the specimen in a linear direction extended in an x direction of the specimen detected by displacement detecting means 14 is input to a differentiator 21 to calculate a distortion  $\varepsilon_{xx}(x)$  of x direction. A distortion  $\varepsilon_{xx}(A)$  of a reference point A of them is stored in a sample-and-hold circuit 22, and a ratio of the distortion  $\varepsilon_{xx}(A)$  to the distortion  $\varepsilon_{xx}(x)$  continued thereto is obtained by a divider 23. A ratio  $r_{xx}(A)/r_{xx}(x)$  is a ratio  $G(x)/G(A)$  of an elastic modulus in shear of the points A and x. This ratio is converted to a display signal by the converter 16 to be superposed on the tomographic image of the

specimen, and a hard part in the specimen is color-displayed by a luminance responsive to the hardness.

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